$ RCE 1774

Attorney Docket No.: D00532/70031 GSE/MAB

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

Subsection (b) of 35 U.S.C. § 132, effective on May 29, 2000, provides for continued examination of an utility or plant application filed on or after June 8, 1995. See The American Inventors Protection Act of 1999 (AIPA).

Application Number	**09/543,281**
Confirmation Number	**6483**
Filing Date	**April 5, 2000**
First Named Inventor	**Guolin Ma et al**
Group Art Unit	**1774**
Examiner Name	**Ferguson, Lawrence D.**

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application.

NOTE: *37 C.F.R. § 1.114 is effective on May 29, 2000. If the above-identified application was filed prior to May 29, 2000, **you** may wish to consider filing a continued prosecution application (CPA) under 37 C.F.R. § 1.53 (d) instead of an RCE to be eligible for the patent term adjustment provisions of the AIPA.*

1. Submission required under 37 C.F.R. § 1.114

   a. Previously submitted

      i. [X] Consider the amendment after final under 37 C.F.R. § 1.116 previously filed on October 18, 2002.
      (Any unentered amendment(s) referred to above will be entered.)

      ii. [ ] Consider the arguments in the Appeal Brief or Reply Brief previously filed on .

      iii. [ ] Other:

   b. Enclosed is/are:

      i. [ ] Amendment/Reply

      ii. [ ] Affidavit(s)/Declaration(s)

      iii. [ ] Information Disclosure Statement (IDS)

      iv. [X] Other: Response to Advisory Action submitted herewith

2. Miscellaneous

   a. [ ] Suspension of action on the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of ___ months. (Period of suspension shall not exceed 3 months) and the Fee **of $130.00** under 37 C.F.R. § 1.17(i) is enclosed.

   b. [ ] Other:

3. Fees - The RCE fee under 37 C.F.R. §1.17(e) is required by 37 C.F.R. §1.114 when the RCE is filed.

   a. [X] Enclosed is a check in the amount of $830.00 which covers:

      i. [X] RCE fee required under 37 C.F.R. § 1.17(e)

      ii. [X] Three-Month Extension of time fee (37 C.F.R. §§ 1.136 and 1.17)

      iii. [ ] Other

4. If the filing of this RCE necessitates an extension of time under 37 CFR §1.136(a), the applicant hereby requests such extension of time.

5. If there is no check enclosed, or if the amount of the enclosed check in this RCE is incorrect, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 23/2825.

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6. CORRESPONDENCE ADDRESS
Correspondence address below
CUSTOMER NUMBER:  **23628**

7. SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED	
NAME	Gary S. Engelson, Reg. No. 35,128
SIGNATURE	Gary S. Engelson
DATE	December 19, 2002

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to **BOX RCE**, Commissioner for Patents, Washington, D.C. 20231, on the 19th day of December, 2002

Gary S. Engelson

#15
12-31-02

RESPONSE UNDER 37 C.F.R. §1.116
- EXPEDITED PROCEDURE -
EXAMINING GROUP 1774

Attorney's Docket No. D00532/70031 GSE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Guolin Ma et al.
Serial No:	09/543,281
Confirm. No.:	6483
Filed:	April 5, 2000
For:	OPTICAL RECORDING MEDIA FOR AIR-INCIDENT OPTICAL RECORDING
Examiner:	Ferguson, L.
Art Unit:	1774

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Box RCE, Commissioner for Patents, Washington, D.C. 20231 on December 19, 2002.

Gary S. Engelson, Reg. No. 35,128

Box RCE
Commissioner for Patents
Washington, D.C. 20231

RESPONSE TO ADVISORY ACTION

Dear Sir:

In response to the Advisory Action dated November 19, 2002, Applicant respectfully requests reconsideration and submits the following remarks. The comments provided in the Advisory Action have been considered, but Applicant continues to believe that the application is in allowable condition.

Initially, Applicant notes that it appears from Items 2 and 7 of the Advisory Action that the Examiner has entered all of the amendments included in the Amendment After Final filed on October 18, 2002. However, if any of the amendments included in the Amendment After Final have not been entered, Applicant respectfully requests entry of the amendments.

I. Request for an Interview

Applicant respectfully requests that the Examiner contact Applicant's representative at 617-720-3600 x360 before issuing an Office Action pursuant to the RCE filed herewith if the comments provided herein are not believed to place the application in condition for allowance. It is believed that a telephone discussion may be helpful in resolving at least some of the outstanding issues. Applicant appreciates all efforts made by the Examiner on Applicant's behalf to further the prosecution of this application.

II. Rejection under 35 U.S.C. §112, First Paragraph

The Advisory Action states that the rejection under 35 U.S.C. §112, first paragraph, has been upheld because "Applicant fails to fully address the lack of support for 'a coating system of layers having a thermal conductivity that maintains the coating system of layers at a temperature that does not cause more evaporation during read and write operations of the same coating system of layers and of molecules adsorbed therein from an ambient atmosphere than absent the read and write operations'." Further to the arguments presented in the Amendment After Final, filed on October 18, 2002 and hereby incorporated herein by reference, Applicant presents the following additional arguments with respect to the outstanding rejection under 35 U.S.C. §112, first paragraph.

The claim language alleged by the Examiner to lack written description support is reproduced below in italics. To aid the Examiner in identifying the support for the claim language in the written description, portions of the written description that support the claim language have been cited below corresponding portions of the italicized claim language:

- *"a coating system of layers having a thermal conductivity..."*

  Page 3, Lines 27-30: "The protective overcoat layer can be designed to have low thermal conductivity to further isolate the heat generated by the making and erasing operations by an optical beam or can be designed to have a high thermal conductivity to quickly dissipate the transmitted heat over a wide area."

- *"...that maintains the coating system of layers at a temperature that does not cause more evaporation during read and write operations of the coating system of layers and of molecules adsorbed therein from an ambient atmosphere..."*

> Page 3, Lines 22-25: "...a surface of the disk on which optical energy impinges experiences a temperature such that no significant evaporation of the protective overcoat layer and no significant evaporation of adsorbed molecules from ambient atmosphere occur."

- *"...than absent the read and write operations."*

> Page 6, Lines 21-24 (in reference to conventional air-incident disk structures): "Elevation of the surface temperature can have undesirable effects on the lubrication properties and causes evaporation of some lubricant. Also, any airborne contaminant including moisture present in the ambient atmosphere, which may have been adsorbed into the surface of the disk, may be evaporated."

Accordingly, the specification is believed to satisfy the written description requirement set forth in 35 U.S.C. §112, first paragraph. In particular, it is believed that the language "a coating system of layers having a thermal conductivity that maintains the coating system of layers at a temperature that does not cause more evaporation during read and write operations of the coating system of layers and of molecules adsorbed therein from an ambient atmosphere than absent the read and write operations" is fully supported in the written description, as set forth above. In view of the foregoing, withdrawal of the rejection of claims 1-31 under 35 U.S.C. §112, first paragraph, is respectfully requested.

If, for any reason, the Examiner continues to believe that the specification fails to satisfy the written description requirement, the Examiner is respectfully requested to present evidence or reasons, as required by M.P.E.P. §2163.04, why persons skilled in the art would not recognize a description of the invention, defined by the claims, in Applicant's disclosure.

III. Rejection under 35 U.S.C. §103(a) over Buckingham in view of Rosen

In the Advisory Action, the Examiner states that "Applicant argues that there is no teaching in Rosen of low thermal conductivity. Rosen teaches low thermal conductivity in column 8, lines 23-27."

Although Rosen teaches a layer of low thermal conductivity for the purpose of maintaining the mechanical stability of a substrate of a substrate-incident medium, Applicant respectfully asserts, as set forth in Applicant's Amendment After Final, that a person of ordinary skill in the art would not have been motivated to combine the teaching in Rosen of a layer with low thermal conductivity for protecting the substrate from deformation with the teachings of Buckingham, because Buckingham teaches an *air-incident medium.* In an air-incident medium, there is no substrate on the light-incident surface of the disk.

The Advisory Action also states that "Buckingham and Rosen are analogous art because they are both directed to multilayer recording media and Rosen teaches incorporating low thermal conductivity in a multilayer recording media for protecting the substrate from deformation." It appears that the Examiner may have misapprehended Applicant's arguments with respect to Buckingham and Rosen, as Applicant has made no arguments with respect to the references being directed to nonanalogous arts. Rather, as set forth in Applicant's Amendment After Final, Applicant respectfully asserts that the combination of Buckingham and Rosen in the manner suggested in the Office Action is improper, as the disclosures in these references specifically teach away from the described combination. In particular, it is asserted that there is no motivation to "include the low thermal conductive properties of Rosen in the dielectric and protective layers of Buckingham," as suggested in the Final Office Action.

For arguments in support of Applicant's assertion that the Examiner's stated basis for combining Buckingham and Rosen is improper, Applicant refers to Section III of the Amendment After Final, filed on October 18, 2002 and incorporated herein by reference. As discussed therein, Rosen teaches a substrate-incident disk having a dielectric layer 51, which acts as a protective layer so that the high temperature that the recording layer 53 experiences during writing and erasing does not deform the substrate 50, onto which laser light is incident (Rosen at Col. 7, lines 18 and 6-19). In an air-incident disk there is no substrate on the light-incident

surface of the disk. Therefore, there would be no motivation to modify an air-incident disk, such as that disclosed in Buckingham, to include a layer such as dielectric layer 51 that protects a substrate from deformation.

To highlight the lack of motivation to apply the teaching in Rosen of a layer of low thermal conductivity to the air-incident disk of Buckingham, Applicant makes note of the following points:

> (1) In the air-incident disk described in Buckingham, no substrate is present at the light incident surface (since, as mentioned above, air-incident disks do not have a substrate at the light-incident surface). Hence, one would not apply the teaching of a layer of low thermal conductivity to Buckingham to prevent substrate deformation, as no substrate exists in the air-incident disk of Buckingham.
>
> (2) A person of ordinary skill in the art would also not apply the teaching in Rosen of a layer of low thermal conductivity to Buckingham to insulate the surface of the air-incident disk of Buckingham, as there is absolutely no teaching in Buckingham that such thermal protection would be desirable. Such a motivation may only be obtained from Applicant's disclosure by the improper use of hindsight.

As should be appreciated form the foregoing, there is no suggestion or motivation to combine the teachings of Buckingham and Rosen in the manner suggested in the Final Office Action. Hence, a *prima facie* case of obviousness has not been established (see M.P.E.P. §§ 2142-2143). Accordingly, the rejection of claims 1-3, 5-6, 8 and 10 over the combination of Buckingham and Rosen is improper, and should be withdrawn.

In addition, Applicant notes that the cited references do not teach or suggest an air-incident optical recording medium comprising a coating system of layers having a thermal conductivity that maintains the coating system of layers at a temperature that does not cause more evaporation during read and write operations of the coating system of layers and of molecules adsorbed therein from an ambient atmosphere than absent the read and write operations, including a first dielectric layer and a protective overcoat, as recited in claim 1 (see Section III of Amendment After Final). In fact, the Final Office Action makes no reference to any citations in either Buckingham or Rosen that relate to maintaining a "coating system of layers at a temperature that does not cause more evaporation during read and write operations of

the coating system of layers and of molecules adsorbed therein from an ambient atmosphere than absent the read and write operations." Indeed, neither Buckingham nor Rosen are directed to preventing the evaporation of contaminates from an optical recording disk. For this additional reason, the Final Office Action fails to set forth a *prima facie* case of obviousness, and the rejection of claim 1, and claims 1-3, 5-6, 8 and 10 which depend therefrom, as being obvious over Rosen in view of Buckingham should be withdrawn. The Examiner is requested to consider the arguments set forth in Section III with respect to the features of the claims not taught or suggested in the cited references, as no reference is made to these arguments in the Advisory Action.

IV. Rejection under 35 U.S.C. §103(a) over Rosen in view of Lee

The Advisory Action also states that "Rosen and Lee are analogous art because they are both directed to recording mediums and Lee teaches incorporating an air bearing assembly with sliding SIL and reduced spot size in a recording medium for convenience to the public." Again, it appears that the Examiner may have misapprehended Applicant's arguments with respect to Rosen and Lee, as Applicant has made no arguments with respect to the references being directed to nonanalogous arts. Rather, as set forth in the previous Amendment After Final, it is respectfully asserted that there is no motivation to combine the teachings of Rosen and Lee, and hence a *prima facie* case of obviousness has not been established (see M.P.E.P. § 2143).

For arguments in support of Applicant's assertion that there is no motivation to combine the teachings of Rosen and Lee, Applicant refers to Section IV of the Amendment After Final, filed on October 18, 2002 and incorporated herein by reference. As discussed therein, a substrate-incident disk, such as that disclosed in Rosen, is not sensitive to modulation and readout by an optical beam directed through a flying optical head. As is well known in the art, a substrate between a flying optical head and an active layer would separate the head too far from the active layer for the system to operate correctly. Thus, one would not have been motivated to combine the teachings of Lee and Rosen, because the flying head assembly of Lee is unsuitable for use with the substrate-incident disk of Rosen and therefore could not be used with the

substrate-incident disk of Rosen in an optical system. Accordingly, the rejection of claims 1-5, 7, and 9-31 over a combination of Rosen and Lee is improper, and should be withdrawn.

In addition, Applicant notes that several features recited in claims 1-5, 7, and 9-31 are *entirely missing* from, and not suggested by, the cited references, as discussed in Section IV of Applicant's Amendment After Final. These features are highlighted below:

> Claims 1 and 11: Claims 1 and 11 recite an air-incident optical recording medium or disk comprising "a coating system of layers having a thermal conductivity that maintains the coating system of layers at a temperature that does not cause more evaporation during read and write operations of the coating system of layers and of molecules adsorbed therein from an ambient atmosphere than absent the read and write operations." Rosen does not teach an air-incident optical recording medium, but rather a substrate-incident recording medium. While Lee refers to the fact that an optical disk may be used with the disclosed optical flying head, Lee is completely silent with respect to specific features of the optical disk and, in particular, with respect to any discussion of layers or the thermal conductivity thereof. Hence, neither reference teaches the air-incident optical recording medium or disk recited in claims 1 and 11.
>
> Claims 21 and 25: Claims 21 and 25 recite an air-incident optical recording medium or disk in which a recording layer is separated from a surface of the disk by layers having a total thickness less than about 1μm. Rosen teaches a substrate-incident recording medium having a substrate with a thickness of approximately 600μm (page 6, lines 2-5). While Lee refers to the fact that an optical disk may be used with the disclosed optical flying head, Lee is completely silent with respect to specific features of the optical disk and, in particular, with respect to any discussion of layers. Hence, neither reference teaches the air-incident optical recording medium or disk recited in claims 21 and 25.

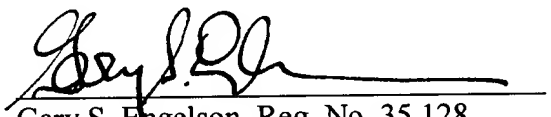
As should be appreciated form the foregoing, Rosen and Lee fail to teach or suggest all of the limitations of each of claims 1, 11, 21, and 25. For this additional reason, the Final Office Action fails to set forth a *prima facie* case of obviousness with respect to these claims, and the rejection of independent claims 1, 11, 21, and 25, and dependent claim 2-5, 7, 9-10, 12-20, 22-24, and 26-31 which depend therefrom, as being obvious over Rosen in view of Lee should be withdrawn. The Examiner is requested to consider the arguments set forth in Section IV with respect to the features of the claims not taught or suggested in the cited references, as no reference is made to these arguments in the Advisory Action.

Conclusion

In view of the foregoing, this application should be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to deposit account No. 23/2825.

Respectfully submitted,
Guolin Ma et al., Applicant

By: 

Gary S. Engelson, Reg. No. 35,128
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Tel. No.: (617) 720-3500
Attorney for Applicant

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